

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:  
Gurtej S. Sandhu

Serial No.:

Filed: November 9, 2001

For: A METHOD TO FORM ETCH AND/OR  
CMP STOP LAYERS

§  
§ Group Art Unit:  
§  
§ Examiner:  
§  
§ Atty. Docket: 98-1191.01  
§  
§ Paper No.  
§

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jc835 U.S. PTO  
10/010895  
11/09/01

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Washington, D.C. 20231

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ADDRESSED TO THE COMMISSIONER FOR PATENTS,  
WASHINGTON, D.C. 20231.

Dear Sir:

Susan Jerome  
Signature

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant respectfully requests that this Information Disclosure Statement be entered and that the references listed on the attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed references are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R. § 1.97(b), this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other possible material information as defined in 37 C.F.R. § 1.56(a) exists.

The following references are submitted for the Examiner's review:

U.S. Patents

<u>U.S. Patent No.</u>	<u>Issue Date</u>	<u>Inventor</u>
5,985,770	11/16/99	Sandhu et al.
5,880,007	03/09/99	Varian et al.
5,872,058	02/16/99	Van Cleemput et al.
5,872,052	02/16/99	Iyer
5,858,869	01/12/99	Chen et al.
5,814,564	09/29/98	Yao et al.
5,804,506	09/08/98	Haller et al.
5,641,545	06/24/97	Sandhu
5,633,211	05/27/97	Imai et al.

5,485,035	01/16/96	Lin et al.
5,448,097	09/05/95	Mizushima et al.
5,302,233	04/12/94	Kim et al.
4,474,831	10/02/84	Downey
4,016,017	04/05/77	Aboaf et al.

#### Foreign Patents

EP 0875 930 A2	11/04/98	Lig et al.	Europe
EP 0875 929 A2	11/04/98	Lig et al.	Europe

#### Other References

Sabine Penka, et al., *Integration Aspects of Flowfill and Spin-on-Glass Process for Sub-0.35 $\mu$ m Interconnects*, PROCEEDINGS OF THE IEEE 1998 INTERNATIONAL INTERCONNECT TECHNOLOGY CONFERENCE, at 271-273 (1998).

U. Höckele, et al., *Flowfill-Process as a New Concept for Inter-Metal-Dielectrics*, MATERIALS SCIENCE FORUM, at 235-238 (1998).

K. Beekmann, et al., *Sub-micron Gap Fill and In-Situ Planarisation using Flowfill™ Technology*, CONFERENCE PROCEEDINGS ULSI XI, MATERIALS RESEARCH SOCIETY, at 137-143 (1996).

A. Hass Bar-Ilan et al., *A comparative study of sub-micron gap filling and planarization techniques*, PROCEEDINGS OF THE SPIE – THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, at 277-288 (1995).

Wolf et al., *Silicon Processing for the VLSI Era vol. 1: Process Technology*, 1986, Lattice Press, California, pp. 190

As this information is being submitted within three months of the date of filing of the application, Applicant understands that no fee or certification is required for the submission and consideration of this information at this time.

If there are any matters which may be resolved or clarified through telephone interview, the Examiner is respectfully requested to contact Applicant's undersigned attorney at the number indicated.

\* \* \* \* \*

A Form PTO-1449 is enclosed herewith.

Respectfully submitted,



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ATTORNEY FOR APPLICANT

Date: 11/7/11

FORM: PTO-1449 (REV: 7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Atty Docket No: <b>98-1191.01</b>	Serial No:
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (37 CFR 1.98(b)) (use several sheets if necessary)		Applicant: <b>Gurtej S. Sandhu</b>	
		Filing Date: <b>November 9, 2001</b>	Group:

JC835 U.S. PTO  
10/010895  
11/09/01

**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	
	AA	5,985,770	11/16/99	Sandhu et al.	438	787
	AB	5,880,007	03/09/99	Varian et al.	438	427
	AC	5,872,058	02/16/99	Van Cleemput et al.	438	692
	AD	5,872,052	02/16/99	Iyer	438	622
	AE	5,858,869	01/12/99	Chen et al.	438	597
	AF	5,814,564	09/29/98	Yao et al.	438	723
	AG	5,804,506	09/08/98	Haller et al.	438	649
	AH	5,641,545	06/24/97	Sandhu	427	573
	AI	5,633,211	05/27/97	Imai et al.	438	760
	AJ	5,485,035	01/16/96	Lin et al.	257	637
	AK	5,448,097	09/05/95	Mizushima et al.	257	435

**FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS								
Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation		
						Yes	No	
	AL	EP 0 875 930 A2	11/04/98	Europe	H01L 21	768	<input type="checkbox"/>	<input type="checkbox"/>
	AM	EP 0 875 929 A2	11/04/98	Europe	H01L 21	768	<input type="checkbox"/>	<input type="checkbox"/>
	AN						<input type="checkbox"/>	<input type="checkbox"/>
	AO						<input type="checkbox"/>	<input type="checkbox"/>
	AP						<input type="checkbox"/>	<input type="checkbox"/>
	AQ						<input type="checkbox"/>	<input type="checkbox"/>

Initial

**OTHER ART** (including author, title, date, pertinent pages, etc.)

	AR		Sabine Penka, et al., <i>Integration Aspects of Flowfill and Spin-on-Glass Process for Sub-0.35μm Interconnects</i> , PROCEEDINGS OF THE IEEE 1998 INTERNATIONAL INTERCONNECT TECHNOLOGY CONFERENCE, at 271-273 (1998).
	AS		U. Höckele, et al., <i>Flowfill-Process as a New Concept for Inter-Metal-Dielectrics</i> , MATERIALS SCIENCE FORUM, at 235-238 (1998).
	AT		K. Beekmann, et al., <i>Sub-micron Gap Fill and In-Situ Planarisation using Flowfill™ Technology</i> , CONFERENCE PROCEEDINGS ULSI XI, MATERIALS RESEARCH SOCIETY, at 137-143 (1996).

Examiner:	Date Considered:
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication with applicant.

FORM: PTO-1449 (REV: 7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Atty Docket No: <b>98-1191.01</b>	Serial No:
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (37 CFR 1.98(b)) (use several sheets if necessary)		Applicant: <b>Gurtej S. Sandhu</b>	
		Filing Date: Group: Concurrently Herewith	

## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	
AA	5,302,233	04/12/94	Kim et al.	156	636	
AB	4,474,831	10/02/84	Downey	438	800	
AC	4,016,017	04/05/77	Aboaf et al.	438	441	
AD						
AE						
AF						
AG						
AH						
AI						
AJ						
AK						

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No
AL						<input type="checkbox"/>	<input type="checkbox"/>
AM						<input type="checkbox"/>	<input type="checkbox"/>
AN						<input type="checkbox"/>	<input type="checkbox"/>
AO						<input type="checkbox"/>	<input type="checkbox"/>
AP						<input type="checkbox"/>	<input type="checkbox"/>
AQ						<input type="checkbox"/>	<input type="checkbox"/>

Initial

## OTHER ART (including author, title, date, pertinent pages, etc.)

AR		A. Hass Bar-Ilan, et al., <i>A Comparative Study of Sub-micron Gap Filling and Planarization Techniques</i> , PROCEEDINGS OF THE SPIE – THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, at 277-288 (1995).
AS		Wolf et al., <i>Silicon Processing for the VLSI Era vol. 1: Process Technology</i> , 1986, Lattice Press, California, pp. 190
AT		

Examiner:	Date Considered:
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